# **Breeding Bird Survey Summary Report Bayfield County Forest Units 1 and 8**



Project Initiated by: Bayfield Co. Forestry Dept. - Washburn, WI





Survey Conducted by and Report Prepared by:

Endangered Resource Services, LLC Matthew S. Berg, Research Biologist St. Croix Falls, Wisconsin June 11-July 4, 2009

# **Introduction and Methods:**

I conducted 350 Breeding Bird Survey unlimited point counts, and 53 nightjar point counts in the Bayfield Co. Forest Integrated Resource Management Units (IRMU) 1 and 8 from June 11 to July 4, 2009. A total of 10 land classifications in various stages of succession were surveyed. They included Lowland Brush, Red Pine, White Pine, White Birch, Aspen, Red Oak, Northern Hardwoods, Hemlock, Swamp Hardwoods and Swamp Conifers. These units were actively managed by a variety of methods including selective and clear cut timber harvest, tree planting, and mechanical brush removal. Habitats were generally moist as clay is the most common soil base in the area.

Breeding Bird Survey methods generally followed the protocol established by Howe et al (1997). Points were predetermined by the Bayfield County Forestry Department, and located by GPS (Garmin 76CSX) and compass. Surveys started at first light and extended to approximately 10:00 unless conditions warranted otherwise. Surveys were not conducted when winds were >12mph and affected bird detection or when there was precipitation. I recorded all birds seen and heard at each point during the 10 minute count period, noted the minute (1-10) each was first detected, and estimated the distance to each bird (25, 50 100 or >100m). Temperature, wind speed and sky condition were also recorded.

Nightjar surveys followed the methods establish by the Wisconsin Breeding Bird Initiative (Paulios, 2008). Survey points were established along a predetermined route at 1 road mile intervals. I listened for six minutes for nightjars at each site. Other nocturnal calling birds like owls, cuckoos, etc. were also noted. If birds were detected, I documented each minute(s) they were calling separately. Site description, location, number of houses, background noise, passing cars, wind, and sky conditions, and up to three dominant habitat descriptors (open, pine forest, hardwood forest, marsh/wetland and water) were also recorded. Surveys started after sunset and once the moon was above the horizon and at least ½ full. Surveys ended after the moon set or before sunrise. All data was subsequently entered into an Excel spreadsheet for later analysis.

# **Results and Species Summaries:**

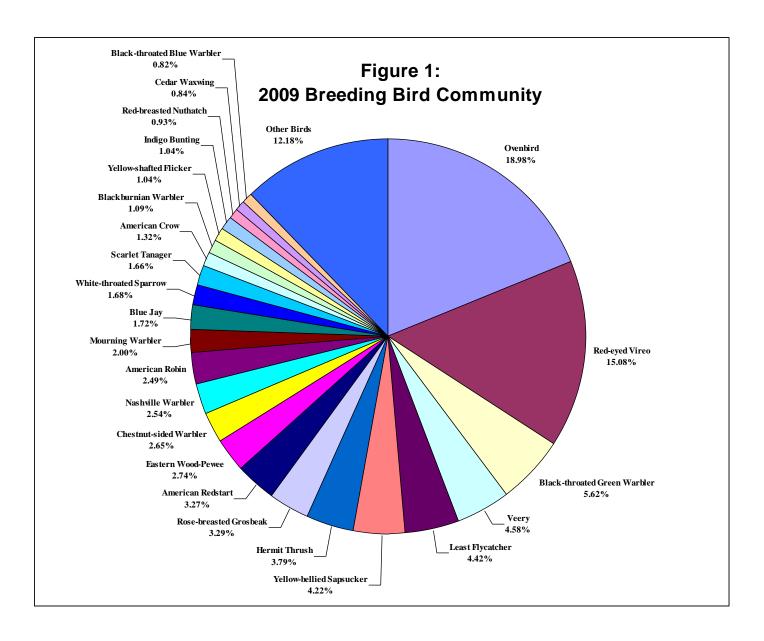
I documented a total of 4409 birds during the BBS representing 82 species for a mean of 12.60 birds/plot (Table 1). Two other species, Hooded Warbler (*Wilsonia citrina*) and American Woodcock (*Scolopax minor*) were observed between points. Ovenbirds (*Seiurus aurocapillus*), Red-eyed Vireo (*Vireo olivaceus*) and Black-throated Green Warblers (*Dendroica virens*) were the most abundant species making up 18.98%, 15.08% and 5.62% of the breeding bird community respectively (Figure 1). Eleven other species made up at least 2% of birds surveyed. They included Veery (*Catharus fuscescens*), Least Flycatcher (*Empidonax minimus*), Yellow-bellied Sapsucker (*Sphyrapicus varius*), Hermit Thrush (*Catharus guttatus*), Rose-breasted Grosbeak (*Pheucticus ludovicianus*), American Redstart (*Setophaga ruticilla*), Eastern Wood-Peewee (*Contopus virens*), Chestnut-sided Warbler (*Dendroica pensylvanica*), Nashville Warbler (*Vermivora ruficapilla*), American Robin (*Turdus migratorius*) and Mourning Warbler (*Oporornis philadelphia*).

# Table 1: Breeding Bird Community Forestry IRMUs 1 and 8, Bayfield County June 11-July 4, 2009

		Total	Mean #	% of
Common Name	Scientific Name	Number	Per Site	Community
Ovenbird	Seiurus aurocapillus	837	2.391	18.98%
Red-eyed Vireo	Vireo olivaceus	665	1.900	15.08%
Black-throated Green Warbler	Dendroica virens	248	0.709	5.62%
Veery	Catharus fuscescens	202	0.577	4.58%
Least Flycatcher	Empidonax minimus	195	0.557	4.42%
Yellow-bellied Sapsucker	Sphyrapicus varius	186	0.531	4.22%
Hermit Thrush	Catharus guttatus	167	0.477	3.79%
Rose-breasted Grosbeak	Pheucticus ludovicianus	145	0.414	3.29%
American Redstart	Setophaga ruticilla	144	0.411	3.27%
Eastern Wood-Pewee	Contopus virens	121	0.346	2.74%
Chestnut-sided Warbler	Dendroica pensylvanica	117	0.334	2.65%
Nashville Warbler	Vermivora ruficapilla	112	0.320	2.54%
American Robin	Turdus migratorius	110	0.314	2.49%
Mourning Warbler	Oporornis philadelphia	88	0.251	2.00%
Blue Jay	Cyanocitta cristata	76	0.217	1.72%
White-throated Sparrow	Zonotrichia albicollis	74	0.211	1.68%
Scarlet Tanager	Piranga olivacea	73	0.209	1.66%
American Crow	Corvus brachyrhynchos	58	0.166	1.32%
Blackburnian Warbler	Dendroica fusca	48	0.137	1.09%
Yellow-shafted Flicker	Colaptes a. auratus	46	0.131	1.04%
Indigo Bunting	Passerina cyanea	46	0.131	1.04%
Red-breasted Nuthatch	Sitta canadensis	41	0.117	0.93%
Cedar Waxwing	Bombycilla cedrorum	37	0.106	0.84%
Black-throated Blue Warbler	Dendroica caerulescens	36	0.103	0.82%
Wood Thrush	Hylocichla mustelina	29	0.083	0.66%
Black-and-white Warbler	Mniotilta varia	28	0.080	0.64%
Common Raven	Corvus corax	27	0.077	0.61%
Yellow-rumped Warbler	Dendroica coronata	26	0.074	0.59%
American Goldfinch	Spinus tristis	26	0.074	0.59%
Common Yellowthroat	Geothlypis trichas	24	0.069	0.54%
Pine Warbler	Dendroica pinus	23	0.066	0.52%
Black-capped Chickadee	Poecile atricapillus	23	0.066	0.52%
Canada Warbler	Wilsonia canadensis	23	0.066	0.52%
Alder Flycatcher	Empidonax alnorum	22	0.063	0.50%
Song Sparrow	Melospiza melodia	20	0.057	0.45%
Chipping Sparrow	Spizella passerina	18	0.051	0.41%
Swainson's Thrush	Catharus ustulatus	15	0.043	0.34%
Great Crested Flycatcher	Myiarchus crinitus	15	0.043	0.34%
White-breasted Nuthatch	Sitta carolinensis	14	0.040	0.32%
Hairy Woodpecker	Picoides villosus	13	0.037	0.29%
Ruby-throated Hummingbird	Archilochus colubris	12	0.034	0.27%
Yellow-bellied Flycatcher	Empidonax flaviventris	12	0.034	0.27%
Northern Parula	Parula americana	12	0.034	0.27%

# Table 1 (cont'): Breeding Bird Community Forestry IRMUs 1 and 8, Bayfield County June 11-July 4, 2009

Common Name	Scientific Name	Total Number	Mean # Per Site	% of Community
Ruffed Grouse	Bonasa umbellus	11	0.031	0.25%
Winter Wren	Troglodytes troglodytes	11	0.031	0.25%
Red-winged Blackbird	Agelaius phoeniceus	10	0.029	0.23%
Barred Owl	Strix varia	10	0.029	0.23%
Pileated Woodpecker	Dryocopus pileatus	9	0.026	0.20%
Golden-winged Warbler	Vermivora chrysoptera	8	0.023	0.18%
Blue Headed Vireo	Vireo solitarius	8	0.023	0.18%
Pine Siskin	Spinus pinus	7	0.020	0.16%
Yellow-throated Vireo	Vireo flavifrons	7	0.020	0.16%
Magnolia Warbler	Dendroica magnolia	6	0.017	0.14%
Swamp Sparrow	Melospiza georgiana	6	0.017	0.14%
Golden-crowned Kinglet	Regulus satrapa	6	0.017	0.14%
Mourning Dove	Zenaida macroura	6	0.017	0.14%
Black-billed Cuckoo	Coccyzus erythropthalmus	4	0.011	0.09%
Eastern Towhee	Pipilo erythrophthalmus	4	0.011	0.09%
Broad-winged Hawk	Buteo platypterus	3	0.009	0.07%
Whip-poor-will	Caprimulgus vociferus	3	0.009	0.07%
Purple Finch	Carpodacus purpureus	3	0.009	0.07%
Brown Creeper	Certhia americana	3	0.009	0.07%
Gray Catbird	Dumetella carolinensis	3	0.009	0.07%
Baltimore Oriole	Icterus galbula	3	0.009	0.07%
Wood Duck	Aix sponsa	2	0.006	0.05%
Evening Grosbeak	Coccothraustes vespertinus	2	0.006	0.05%
Sandhill Crane	Grus canadensis	2	0.006	0.05%
Red Crossbill	Loxia curvirostra	2	0.006	0.05%
Brown-headed Cowbird	Molothrus ater	2	0.006	0.05%
Downy Woodpecker	Picoides pubescens	2	0.006	0.05%
Sharp-shinned Hawk	Accipiter striatus	1	0.003	0.02%
Long-eared Owl	Asio otus	1	0.003	0.02%
Red-tailed Hawk	Buteo jamaicensis	1	0.003	0.02%
Brewer's Blackbird	Euphagus cyanocephalus	1	0.003	0.02%
Wilson's Snipe	Gallinago delicata	1	0.003	0.02%
Ring-billed Gull	Larus delawarensis	1	0.003	0.02%
Connecticut Warbler	Oporornis agilis	1	0.003	0.02%
Common Grackle	Quiscalus quiscula	1	0.003	0.02%
Eastern Phoebe	Sayornis phoebe	1	0.003	0.02%
Northern Waterthrush	Seiurus noveboracensis	1	0.003	0.02%
Brown Thrasher	Toxostoma rufum	1	0.003	0.02%
Eastern Kingbird	Tyrannus tyrannus	1	0.003	0.02%



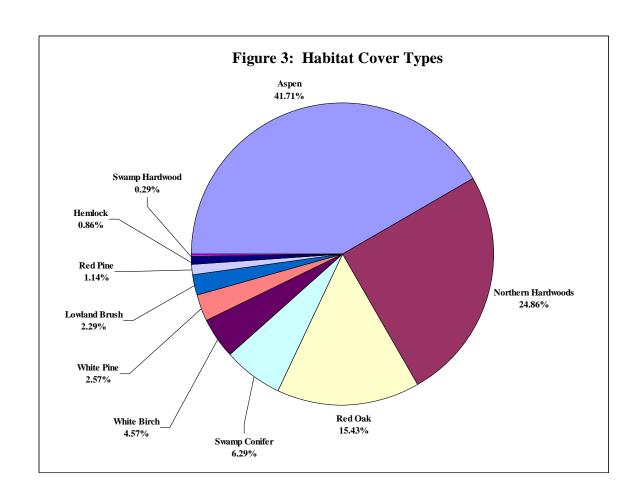
In general, we found that regenerating aspen clear cuts, hardwood areas with White pine (*Pinus strobus*) super canopies, and thinned Sugar maple (*Acer saccharinum*) /Northern red oak (*Quercus rubrum*) with multilayered canopy, midstory and brush layers had the highest densities and diversities. Conversely, unthinned, homogeneous closed canopied sugar maple monoculture with little or no understory and homogeneous closed canopy aspen forests with no understory and hard edges had the fewest individuals and lowest diversity (personal observation). Forestry management practices that promoted large contiguous habitats, multilayered canopies, and preserved at least some mature trees and snags during timber harvest also seemed to increased density and diversity (personal observation).

During five nights of surveys, I located at least 27 nightjars (Figure 2). Of these 25 were Whip-poor-wills (*Caprimulgus vociferous*) and two were Common Nighthawks (*Chordeiles minor*). Four additional Whip-poor-wills were heard, but it was assumed that one for sure and likely three others were multiple detections of single birds. A lone Great-horned Owl (*Bubo virginianus*) and nine Barred Owls (*Strix varia*) were also detected. The survey ran through mostly uninhabited areas with little artificial light or noise pollution. Whip-poor-wills were restricted to open forest and clear cut habitats in the Echo Valley, Happy Hollow, and Mountain Road /CTH C areas. We found Common Nighthawks at a single point over open Jack pines (*Pinus banksiana*) with a grass understory near the jct. of Mountain Road and CTH C.

Survey points were distributed across ten general habitat types (Figure 3). Aspen was almost exclusively Quaking aspen (*Populus tremuloides*), while Sugar maple dominated most Northern hardwoods stands. We found Swamp conifer sites to be highly variable with some combination of White cedar (*Thuja occidentalis*), White spruce (*Picea glauca*), Balsam fir (*Abies balsamea*), White pine, Tamarack (*Larix laricina*), and Black spruce (*Picea mariana*). Lowland brush was also variable with Alder (*Alnus incana*), Willow (*Salix* sp.), Bog Rosemary (*Andromeda polifolia*), Leatherleaf (*Chamaedaphne calyculata*), Bog Laurel (*Kalmia polifolia*), and Labrador tea (*Ledum groenlandica*) being present at most sites.

Whip-poor-will (Caprimulgus vociferus) Nightjar Survey Forestry Units 1 and 3 Bayfield County, WI X X June 11 - June 15, 2009 Mawikwe R lueberry կ Trail pr Mountain Rd Star Rte **Birds Found** None Found Ski Hill R niting Rd N Boundary Rd Whitting Rd Kjarvick Rd Federal Forest Rd 236 riendly Valley Rd 0 0.5 1 2 Miles Federal Forest 4

Figure 2: Whip-poor-will Distribution, 2009 Nightjar Surveys



Summaries based on personal observations and field notes taken at and between points.

#### Alder Flycatcher ALFL 4661

I found Alder Flycatchers occupying territories in just about any open "brush" habitat; especially near water and in young aspen clear cuts that had brush clusters. They were also common where young aspen and alder were regrowing near beaver ponds.

#### **American Crow AMCO 4880**

Crows were present anywhere there were openings; especially in around the farm country in the Happy Hollow Valley. Although seldom abundant, we did find a large group of over 30 birds roosting in red pines at the edge of a clear cut.

# American Goldfinch AMGO 5290

Goldfinches were regularly encountered foraging and flying over just about any open habitat.

#### **American Redstart AMRE 6870**

American Redstarts were regularly encountered in middle-aged aspen with canopy gaps that created a vertical component. They were absent from the driest sites, and seemed to prefer >50% hazel understory. Common associates included Veery, Chestnut-sided, Nashville and Mourning Warblers, and Rose-breasted Grosbeaks.

#### **American Robin AMRO 7610**

Robins were found in almost any habitat if there were shrubs for them to nest in. They were especially common in open mixed forests that had at least some Balsam fir in the understory.

# American Woodcock AMWO 2280 - SGCN/Special Concern

I flushed Woodcock on three or four occasions along logging trails through 40+ft young aspen stands on moist sites. We never heard them peenting in the morning or evening. They are probably not common in the area as there were few open areas that they seem to require.

# **Baltimore Oriole BAOR 5070**

We didn't find any Orioles until the last day of the survey when we found three. A pair was nesting around a beaver pond near point AMWM239 and another male was singing at the edge of a lowland brush opening at LBAMWM404.

#### Barred Owl BADO 3680

Barred Owls were regularly encountered in mixed Sugar maple forests with conifer understory components. They were most commonly found in forests within 5 miles north and south of HWY 13.

# Black-and-white Warbler BAWW 6360

I observed Black-and Whites on a regular basis in early-successional, dry deciduous and mixed forests. They were typically located with American Redstarts, Chestnut-sided, Nashville and Black-throated Green Warblers, and Veerys. BAWWs seemed to better tolerate dry/poorer quality regenerating sites of oak grubs mixed with young aspen than other warblers.

# Black-billed Cuckoo BBCU 3880 - SGCN/Special Concern

We only heard four birds the entire month. Two were far away making habitat utilization difficult to determine, but the two closest birds were in very wet aspen openings with nearby Alder and Hazel thickets.

#### Blackburnian Warbler BLBW 6620

Blackburnians occurred in a variety of conifer areas, but they were only reliably found in areas that had canopied/supercanopied White pine trees with a deciduous understory and a well developed brush component. Males were often observed singing from the upper canopy of White pines. Black-throated Green Warblers, Ovenbirds, Rose-breasted Grosbeaks and Yellow-bellied Sapsuckers were common associates.

# Black-capped Chickadee BCCH 7350

A common resident found in just about any forest habitat. They have finished their nesting season, and families were occasionally observed foraging together.

# Black-throated Blue Warbler BTBW 6540 SGCN/Special Concern

The signature bird of the study was Black-throated Blues. They were regular, but not common or abundant being found at only slightly more than 10% of points and making up <1% of the total breeding bird community (Figure 4). BTBW were Sugar maple specialists that seemed to need a variety of other factors to establish territories. Gaps in mature Sugar maple with a variable layered canopy were the most consistent microhabitat requirements we found. Specifically, we estimated that areas with high densities of BTBW had between 60-70% canopy closures. Selective harvest of mature Sugar maple monocultures consistently yielded the highest densities of these birds. Males were often seen singing from dead branches at the edge of gaps in recently logged areas. Some brush or Sugar maple saplings in the understory appeared to enhance habitat, but once these trees reach 15ft the birds abandoned the area. Topography with a gentle slope also seemed to hold more birds. We anticipated that Hemlock stands would hold more birds/be a required habitat component, but our research did not seem to support this. Based on our observations, we believe that this species was historically a gap specialist in sugar maple climax forest that utilized openings created by windthrow. Their most reliable associates were Chestnut-sided, Mourning and Black-throated Green Warblers, Indigo Buntings, Eastern Wood Peewees and Least Flycatchers.

# Black-throated Green Warbler BTNW 6670

Black-throated Green Warblers were the third most abundant bird detected making up over 5% of the total breeding bird community. They were found in most upland forest habitats, and were especially abundant in sugar maple and sugar maple with mixed conifers. They were almost perfectly correlated with both Ovenbird and Red-eyed Vireo presence, and strongly associated with sapsuckers.

#### Blue-headed Vireo BHVI 6290

I found Blue-headeds to be uncommon in mixed forests with conifers in the overstory. I also heard a few in red pine plantations where they were also a regular nester last year in the southwestern part of the county.

#### Blue Jav BLJA 4770

Blue jays thrive just about anywhere. They were most often encountered in open oak forests.

#### Brewer's Blackbird BRBL 5100

A single Brewer's Blackbird was foraging/singing on a logging road in a recent clearcut.

Black-throated Blue Warbler (Dendroica caerulescens) Breeding Bird Survey Forestry Units 1 and 3 Bayfield County, WI June 11 - July 4, 2009 **Birds Found** × None Found **Forest Cover Type** A - ASPEN BW - WHITE BIRCH FS - FIR SPRUCE-\*OLD CODE, RECODE LB - LOWLAND BRUSH LBA - LOWLAND BRUSH - ALDER LM - MINOR LAKE NH - NORTHERN HARDWOODS O-OAK SB - BLACK SPRUCE SC - SWAMP CONIFER-OLD CODE, RECODE SH - SWAMP HARDWOODS 1.25 2.5 SW - WHITE SPRUCE ■ Miles

Figure 4: 2009 Black-throated Blue Warbler Distribution

# **Broad-winged Hawk BWHA 3430**

We found Broad-wings in a variety of habitats that offered open understory/open edges for them to hunt.

#### **Brown Creeper BRCR 7260**

A few Brown Creepers were encountered in pine and mixed forests that had a White spruce component. They are probably more common than the survey indicates as they seemed to sing infrequently.

# Brown Thrasher BRTH 7050 - SGCN/Special Concern

We recorded a single bird at the edge of a recent aspen clear cut near pt. AMWM006. This was the only habitat we found that would have been even marginal for this species during this year's surveys.

#### Brown-headed Cowbird BHCO 4950

I found Cowbirds on only two occasions. The closed canopy habitats away from agriculture apparently provide the vireos and warblers of this area safe haven from these nest parasites.

# Canada Warbler CAWA 6860 - SGCN/Special Concern

Canada Warblers normally occupied areas with approximately 50-70% closed canopy and a well developed and complex brush layer. The birds seemed to prefer the moistest spots available. I normally found Canadas on only the highest quality areas that seem to fit their somewhat narrow habitat requirements. They were especially common along the steep ravines/small streams that occurred south of Star Route Rd. They regularly occurred with Blackburnian and Black-throated Green Warblers, and Blue-headed Vireos. American Redstarts were also associates, but only on the moistest sites - the same sites that seemed to support the highest redstart densities.

# Cedar Waxwing CEDW 6190

Cedar Waxwings were regularly observed in open and semi-open areas feeding on serviceberries (*Amelanchier* sp.), cherries (*Prunus* sp.) and a variety of other fruits.

#### Chestnut-sided Warbler CSWA 6590

Where there were young aspen groves with soft edges there were Chestnut-sided Warblers. They also occurred in clear cut areas with brush patches to mature aspen forests with a brush understory as long as the canopy wasn't completely closed. Common associates included Mourning and Black-and-white Warblers, American Redstarts, and Veerys.

# **Chipping Sparrow CHSP 5600**

Chipping sparrows occurred in a variety of stands containing conifers. We found several males in midstory White spruce, Red pine plantations, and in areas with scattered Balsam fir.

#### Common Grackle COGR 5110

We saw a single grackle fly over a lowland brush site.

# Common Nighthawk CONI 4200

I heard only heard Nighthawks at the Jct. of CTH C and Mountain Rd. The site was an open Jack pine area with grass understory. They seem to be fussier about habitat selection than their most common associate, Whip-poor-wills.

# Common Raven CORA 4860

Ravens were regularly heard flying over plots. At first light near point NHMWM216, I heard them calling back and forth with Timber wolves approximately 100m off to the east of my position.

#### Common Yellowthroat COYE 6810

I found Yellowthroats in most wet brush openings as well as on the margins of beaver ponds. They were often found with Song and White-throated Sparrows, Golden-winged Warblers, and Alder Flycatchers.

# Connecticut Warbler CONW 6780 - SGCN/Special Concern

I found a single Connecticut Warbler in a dry aspen forest with a bracken understory (AMWM111 – definitely mischaracterized as moist). This habitat is unlike any place I have ever encountered this species before. I spent about 15 minutes tracking the bird down before getting visual confirmation. No other birds were heard anywhere during the surveys.

# Downy Woodpecker DOWO 3940

Downy Woodpeckers were uncommon or, more likely, undetected in oak dominated forests.

# Eastern Kingbird EAKI 4440

I found a single Kingbird foraging and calling from Quaking aspen trees surrounding a beaver pond. With little open country in this year's survey area, this was not a bird I was likely to encounter.

#### Eastern Phoebe EAPH4560

A single bird was heard in an open area at a logging trail head just east of Jammer Hill road.

#### Eastern Wood-Pewee EAWP 4610

Pewees were common in most closed canopy forests if there was an open understory and dead branches to serve as sallying perches. They were a regular occupant of mature red oak forests. Least Flycatchers were their most reliable associate along with Hermit Thrushes, and Scarlet Tanagers.

# **Evening Grosbeak EVGR 5140**

Evening Grosbeaks were heard as a flyover at one point and singing from a conifer at another. We did not detect any further birds interpoint.

# Golden-crowned Kinglet GCKI 7480

Kinglets were regularly encountered in swamp conifer stands among White cedar, Tamarack, White and Black spruce. Winter wrens, Yellow-bellied Flycatchers, White-throated Sparrows, and Yellow-rumped, and Nashville Warblers were regular associates.

# Golden-winged Warbler GWWA 6420 - SGCN/Special Concern

Based on all the aspen in the initial survey map, I expected to find more Golden-wings than I did. They seemed to be confined to areas with active aspen sucker growth following clear cut or aspen forest edges that had a soft, heterogeneous edge rather than a sharp drop off to nothing or non-aspen brush. These habitats were rare in the survey area. They were also found in alders around beaver ponds. Associates included Chestnut-sided, Mourning and Black-and-White Warblers, American Redstarts, White-throated Sparrows, Indigo Buntings and Gray Catbirds.

# **Gray Catbird GRCA 7040**

We heard only three catbirds the entire month. Two were on the edges of young regenerating aspen clear cuts, and the third was in brush along a beaver pond opening. Associates included Common Yellowthroats, Golden-winged, Chestnut-sided and Mourning Warblers and White-throated, Song and Swamp Sparrows.

# **Great-crested Flycatcher GCFL 4520**

Great-cresteds were uncommon and became increasingly rarer as I moved further north on the peninsula. We found a number of mature red oak, aspen or mixed forests with mostly closed canopy that looked like they should have provided great habitat, but did not hold birds. Associates included Rose-breasted Grosbeak, Scarlet Tanager, Eastern Wood-Peewee and Least Flycatcher.

#### **Great-horned Owl GHOW 3750**

I heard a single bird during nightjar surveys on the edge of the Red Cliff Reservation on Frog Bay Road.

# Hairy Woodpecker HAWO 3930

Like Downies, I only detected a handful of Hairy Woodpeckers. The birds were in a variety of habitats that didn't seem to have much in common.

# **Hermit Thrush HETH 7590**

A thrush of dry forests, the highly detectable Hermit Thrush was found throughout in any closed or nearly closed canopy forests. Common associates included Veery, Ovenbird, Red-eyed Vireo, Scarlet Tanagers and Rose-breasted Grosbeaks.

#### Hooded Warbler HOWA SGCN/Threatened

On June 23rd, I found the second Hooded Warbler ever documented in Bayfield Co. Shortly after coming into an area that was 80% harvested perhaps 5-10 years ago and now had dense head high Red maple saplings, I saw a Hooded Warbler perched 30m away from me singing a perfect Type 1 song. I was north of HWY 13 about 5 miles west of Red Cliff at N46.89338 W-90.86650. The habitat was not at all what I have seen for them in southern WI, but exactly like where I have seen them in Polk, Burnett and also Pine Co. MN - 5-10 year old selective cut with <50 of the overstory trees left and dense red maple regeneration beneath with the birds singing in the low canopy - usually on dead branches.

# **Indigo Bunting INBU 5980**

Indigo Buntings occurred at scattered locations in generally dry habitat on the edges of open aspen areas. They were often found in shrubs just off logging roads along with American Redstarts, Mourning, Goldenwinged and Chestnut-sided Warblers.

# Least Flycatcher LEFL 4670 – SGCN/Special Concern.

Least Flycatcher required mature forests that had open understory for sallying perches. They were common to abundant in closed canopy oak forests with an open understory. Common associates included Eastern Wood-Peewee, Scarlet Tanager, and Hermit Thrush.

# Long-eared Owl LEOW 3660 - SGCN/Special Concern.

A single female Long-eared owl was heard near pt. AMWM120 on the last survey point of the day. She gave a distinctive series of hoots three times just after I arrived at the point. The area at the point was wet, and had mixed conifers, but it transitioned rapidly into drier open aspen with dense hazel.

# Magnolia Warbler 6570

We found Magnolia Warblers at only five sites, and did not hear them anywhere else interpoint. Birds where located in pockets of dense White Spruce and Balsam Fir and were highly detectable as they tended to sing from exposed perches in the canopy. These microhabitats did not seem to support other species.

# **Mourning Dove MODO 3160**

Mourning Doves were rare in the survey area being found at only a few open pine forest areas and on logging roads in drier aspen area. A habitat generalist of open areas, they had little suitable habitat available to them.

# **Mourning Warbler MOWA 6790**

The "slashing or edge warbler", Mournings colonized areas that have under gone several years of regrowth, and have a well developed deciduous shrub/ground cover layer adjacent to deciduous or mixed forests. Although they don't require aspen suckers at the edges, they seem to prefer it. They were also relatively common on moist red oak edges while being absent on drier sites. This early successional species was often found with Chestnut-sided, Nashville, Black-throated Blue and Golden-winged Warblers, Indigo Buntings, Rose-breasted Grosbeaks and White-throated Sparrows.

# Nashville Warbler NAWA 6450 - Special Concern

From spruce/tamarack bogs, to red pine plantations of all ages, Nashvilles are conifer generalists that seem to occur in just about any habitat that had some openings and brush associated with it. Associates included Mourning and Chestnut-sided Warblers, Red-eyed Vireos, Ovenbirds and Rose-breasted Grosbeaks.

# Northern Parula NOPA 6480 - Special Concern

Northern Parulas were never common, but they were regularly encountered in areas with some White Cedar, White Spruce and White Pine mixed in with a deciduous understory. They were often found with Black-throated Green, Blackburnian, Canada and Nashville Warblers, Hermit Thrush and American Robins.

# Northern Waterthrush NOWA 6750

A single Northern Waterthrush was heard on the edge of a White Cedar Swamp along the Sand River near point SCMWM101.

#### Ovenbird OVEN 6740

The ubiquitous generalist of closed canopy forests, Ovenbirds were found in any habitat that had a roof over their heads. Sugar maple monocultures and dry Quaking aspen stands with no understory often had only a handful of individuals/species, but Ovenbirds were almost always present even in these low productivity habitats. They were almost always accompanied by Red-eyed Vireos and Veerys – in fact on the previous two mentioned habitats, these three were often the only birds present.

#### Pileated Woodpecker PIWO 4050

I found a few widely scattered Pileated Woodpeckers in a variety of closed canopy forest habitats as well as in Red oak forest areas that had recently gone through near clear cuts. A couple of keystones were found in aspen and white birch trees, and several individuals were observed drumming on hollow logs or branches. Associates include Scarlet Tanagers, Eastern Wood-Peewees and Yellow-throated Vireos.

# Pine Siskin PISI 5330

Pine Siskins were heard as flyovers on several points and were perched in spruce on a couple of others. Like goldfinches, they usually simply seemed to be out foraging.

#### Pine Warbler PIWA 6710

Surrounding habitat does not seem to matter for Pine Warblers. As long as there were two-four mature/super canopy Red or White pines, there would be a Pine Warbler. Associates included Chipping Sparrows, Yellow-rumped, Blackburnian and Black-throated Green Warblers, Blue-headed Vireos, Purple Finches and Hermit Thrushes.

# **Purple Finch PUFI 5170**

We found Purple Finches singing in the canopy and super canopy of conifers at 3 sites all of which were swamp conifer/swamp hardwood areas.

# Red-breasted Nuthatch RBNU 7280

I heard Red-breasted Nuthatches in most mature mixed conifer forests. They were often found with Black-throated Green, Black-throated Blue and Nashville Warblers, and Hermit Thrushes.

# Red Crossbill RECR 5210 - SGCN

Two Red Crossbills were flyovers at point AMWM242.

#### Red-eyed Vireo REVI 6240

Next to Ovenbirds, Red-eyes were the most common bird in the study. They reached their highest densities in areas of canopied Quaking aspen, but were also found in Red oak and mixed forests. They were almost always found with Ovenbirds, Veerys, Rose-breasted Grosbeaks, and Scarlet Tanagers.

# Red-tailed Hawk RTHA 3370

A single individual was seen near a clear cut with a few remaining Red oak overstory trees and scattered Hazel and oak grubs.

# Red-winged Blackbird BWBL 4980

We found a few Red-wings around beaver ponds and along streams in Alder thicket openings.

# Ring-billed Gull RBGU

A single bird was a flyover at point ADM004 in the Little Sioux Creek/Jammer Hill Road area.

# Rose-breasted Grosbeak RBGR 5950

I found Rose-breasted Grosbeaks in just about any forested habitat. The males are such prolific singers, and are so detectable in general that their numbers in the over all community is probably skewed, but there's no question they are common in mixed forests with at least some aspen or birch component. While the males where often out singing in open areas, I never saw females except in more closed canopy forests. Scarlet Tanagers, Veerys, Red-eyed Vireos and Ovenbirds were their most common associates.

# **Ruby-throated Hummingbird RTHI 4280**

Considering their low detectability, we found Rubies to be fairly common in a wide variety of habitats. They were observed on numerous occasions "borrowing" sap lunches from Yellow-bellied Sapsucker wells in open Sugar maple forests.

#### **Ruffed Grouse RUGR 4150**

I heard a few grouse drumming and stumbled across a hen and her chicks at a single point in a swamp conifer stand. Males were most often heard in higher moisture aspen forests with a mostly closed canopy. Veerys, Ovenbirds and Red-eyed Vireos were the most common associated species in these areas.

#### Rufous-sided (Eastern) Towhee RSTO (EATO) 5870

We found towhees at only three sites – two recent clear cuts and in a Red pine plantation. Normally found in dry, open sites, this year's study area offered little available habitat for this species.

#### Sandhill Crane SACR 2060

A single pair (unison calling) of cranes was heard on a point near an open meadow just north of Echo Valley Road.

# Scarlet Tanager SCTA 6080

I regularly encountered Scarlet Tanagers in dry open Red oak/White birch forests with limited understory as well as in open Sugar maple/Hemlock stands. They were normally absent from forests that had a strong pine component, or that were exclusively aspen. Black-throated Blue, Black-throated Green and Mourning Warblers, American Redstarts, Hermit Thrushes, Rose-breasted Grosbeaks, Veerys and Eastern Wood-Peewees were regularly encountered with them.

# Sharp-shinned Hawk SSHA 3320

I located a single Sharp-shinned Hawk in a Quaking aspen/Balsam Fire/White Spruce forest.

# Song Sparrow SOSP 5810

Song Sparrows were common at the limited number of sites we surveyed with their preferred habitats of lowland brush, recent clear cuts and beaver pond openings. They were frequently found with White-throated Sparrows, Common Yellowthroats, and Mourning and Chestnut-sided Warblers.

# Swainson's Thrush SWTH 7580 Special Concern

Swainson's Thrush became increasingly common the closer we got to Lake Superior. We found them in most moist forests that had a Balsam fir understory. They were especially common in areas that had a gentle slope. Common associates included Wood Thrush, Veery, Black-throated Green Warblers and American Redstarts.

#### **Swamp Sparrow SWSP 5840**

Swamp sparrows were rare being found at only a couple of lowland brush areas near beaver ponds along with Common Yellowthroats, Song and White-throated Sparrows.

# Veery VEER 7560 - SGCN/Special Concern

I found Veerys at most closed canopy moist to wet deciduous forest points. They were most common in aspen dominated areas, but were also regularly encountered in oak forests and swamp conifer areas. They seemed to prefer sites that had little understory. Almost every site that had Ovenbirds and Red-eyed Vireos in numbers had Veerys as well. These three were often the only species found in 30-40ft young aspen monoculture.

# Whip-poor-will WPWI 4170 - SGCN/Special Concern

Whip-poor-wills were restricted to open forest and clear cut habitats in the Echo Valley, Happy Hollow, and Mountain Road /CTH C areas where they were heard calling from logging roads, fields and other scattered openings. Their tendency to use gravel roads to call from unfortunately resulted in the death of a bird when one flew directly into my truck on my way to my first survey point of the morning.

#### White-breasted Nuthatch WBNU 7270

White-breasted Nuthatches replaced Red-breasted Nuthatches as I moved from mixed conifer to Red oak forests. Although not common, I encountered White-breasteds on a regular basis in these stands.

# White-throated Sparrow WTSP 5580

We found Poor Sam on a variety of edge habitats with moist to wet conditions. They were especially common in lowland areas near beaver ponds and in recent aspen clear cuts where they were associated with other early successional species like Chestnut-sided, Golden-winged, Mourning and Nashville Warblers and Common Yellowthroats.

# Wilson's Snipe WISN 2300

A single male was heard whinnowing over a wet aspen clear cut west of Echo Valle Road.

# Winter Wren WIWR 7220

Birds were present in most lowland conifer areas with closed canopy. They were especially common in areas with White cedar. Northern Parula, Blackburnian and Black-throated Green Warblers and Goldencrowned Kinglets were common associates.

# **Wood Duck WODU 1440**

We found Wood Ducks on most beaver ponds we walked past.

# Wood Thrush - SGCN/Special Concern

Mesic closed canopy areas often held Wood Thrush. The seemed to prefer sites that had some Balsam Fir, and we found a bird on a nest in a young fir <15ft high. Despite being less common than either Veerys or Hermit Thrushes, they were widely distributed throughout the study area.

#### Yellow-bellied Flycatcher 4630 Special Concern

Yellow-bellied Flycatchers were regularly encountered in open swamp conifer stands where they mixed with lowland brush. They were often found with Alder Flycatchers, White-throated Sparrows, Magnolia and Yellow-rumped Warblers. We again found a few individuals in Red Pine plantations.

# Yellow-bellied Sapsucker YBSA 4020

The sixth most common bird in our surveys, we found sapsuckers head banging everywhere there were White birch and Sugar maples. They were especially abundant in pure Sugar maple stands with open understories. In these habitats, their high density led to frequent calling and easy detection.

# Yellow-rumped (Myrtle) Warbler MYWA 6550

We found "Butterbutts" in habitats that had White pine overstories or a high percentage of other evergreens. They were also located in the few mature Red pine plantations we surveyed. Common associates included Blackburnian, Pine, Black-throated Green and Northern Parula Warblers.

#### Yellow-shafted Flicker YSFL 4120

Flickers were observed in a variety of habitats. They were especially common in forested areas near clearings where they could forage for ants.

# Yellow-throated Vireo YTVI 6280

I only found Yellow-throated Vireos in the more mesic Red oak forests and Sugar maple forests with a strong oak component. If there was water located near the point, it added to the likelihood of these birds holding territory. Scarlet Tanagers, Rose-breasted Grosbeaks, Red-eyed Vireos and Veery's were regular associates.

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